NAVAL HEALTH RESEARCH CENTER

San Diego, California

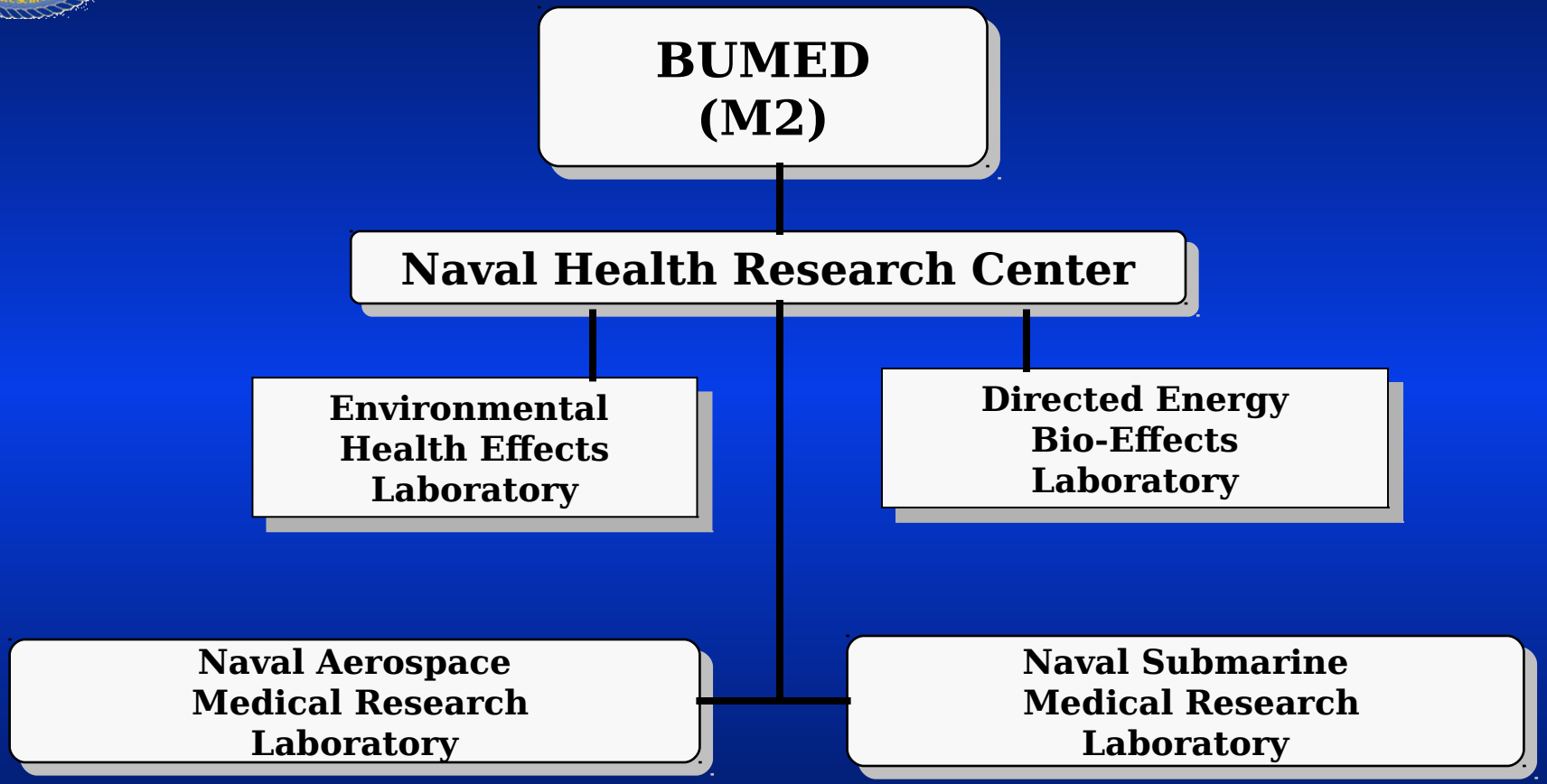
Commanding Officer CAPT James T Luz

Executive Officer CDR Mitchell Dukovich

Technical Director CDR Karl Van Orden

Our Mission: Readiness and support for fleet operations through research, development, and test and evaluation of the biomedical and psychological aspects of Navy and Marine Corps personnel health and performance

Naval Operational Medicine RDT&E Organization



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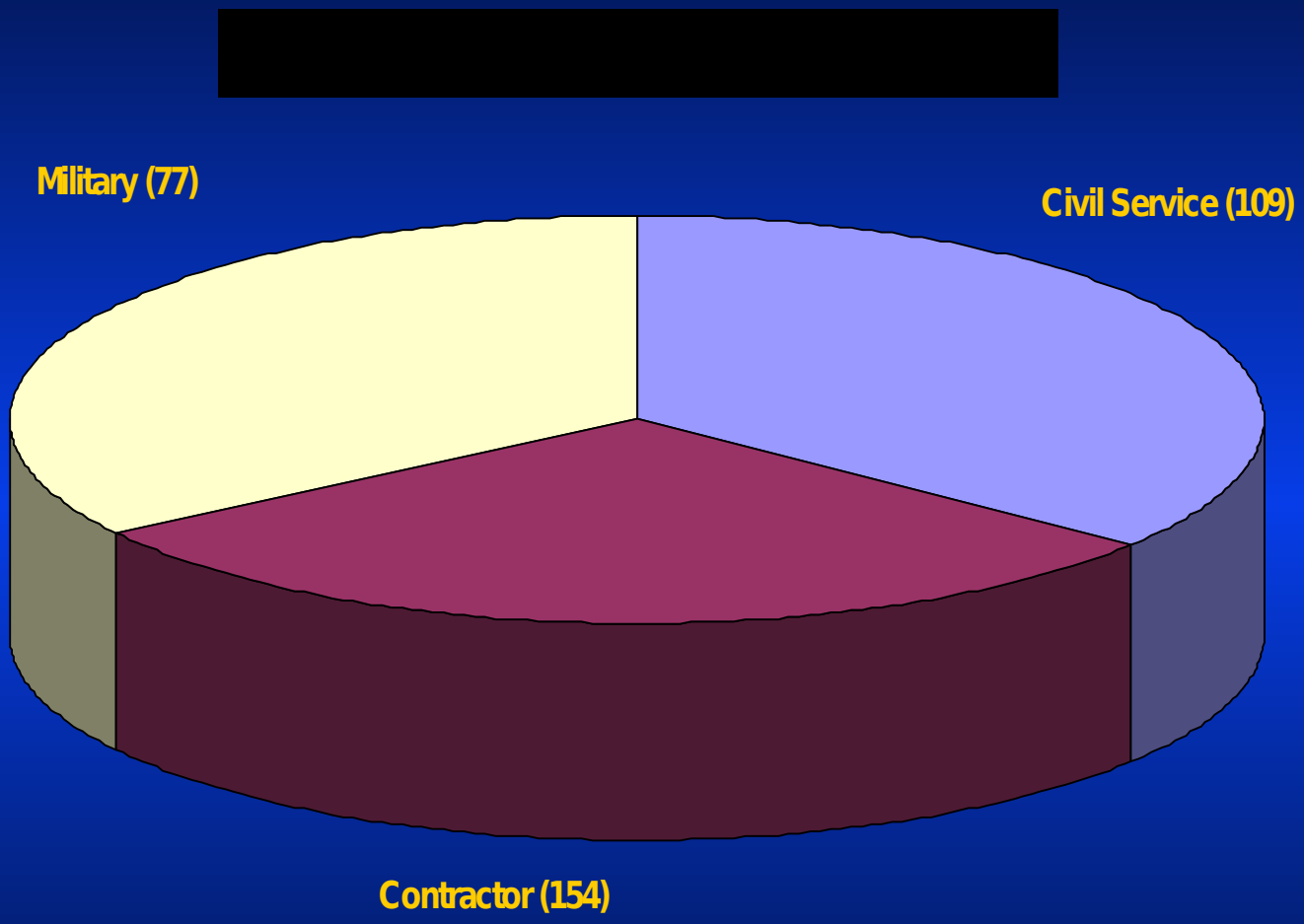

Total = 340

Fleet ***Relevant*** Orientation and Alignment

Joint Vision 2020

Sea Power 21
Marine Corps Strategy 21

Sea Strike	Sea Shield	Sea Basing
Optimizing Human Performance	**Force Health Protection**	**Operational Medical Support**
➢Human capabilities, system integration ➢All environments & fleet platforms, physiologic & cognitive impact	➢Population health & pathogen surveillance studies ➢Impact of toxins and directed energies on health and readiness ➢RDT&E of field medical technologies	➢Assessment and modeling of field medical system supplies and assets

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Reasonable balance of research focus to support fleet need

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Operationally relevant, fleet oriented research studies *and* Consultative Support to the Fleet

- Quick-reaction epidemiology studies
  - Fallon leukemia cluster
  - Gulf War birth defects
  - Strep A incident at BUDS
- Mishap Investigation Support
  - Aviano EA6B incident
- Physical fitness/stress guidance
  - Ergogenic aids for performance enhancement
  - Injury reduction during training
- MCCDC modeling and simulation requests
  - Casualty estimates/supply requirements

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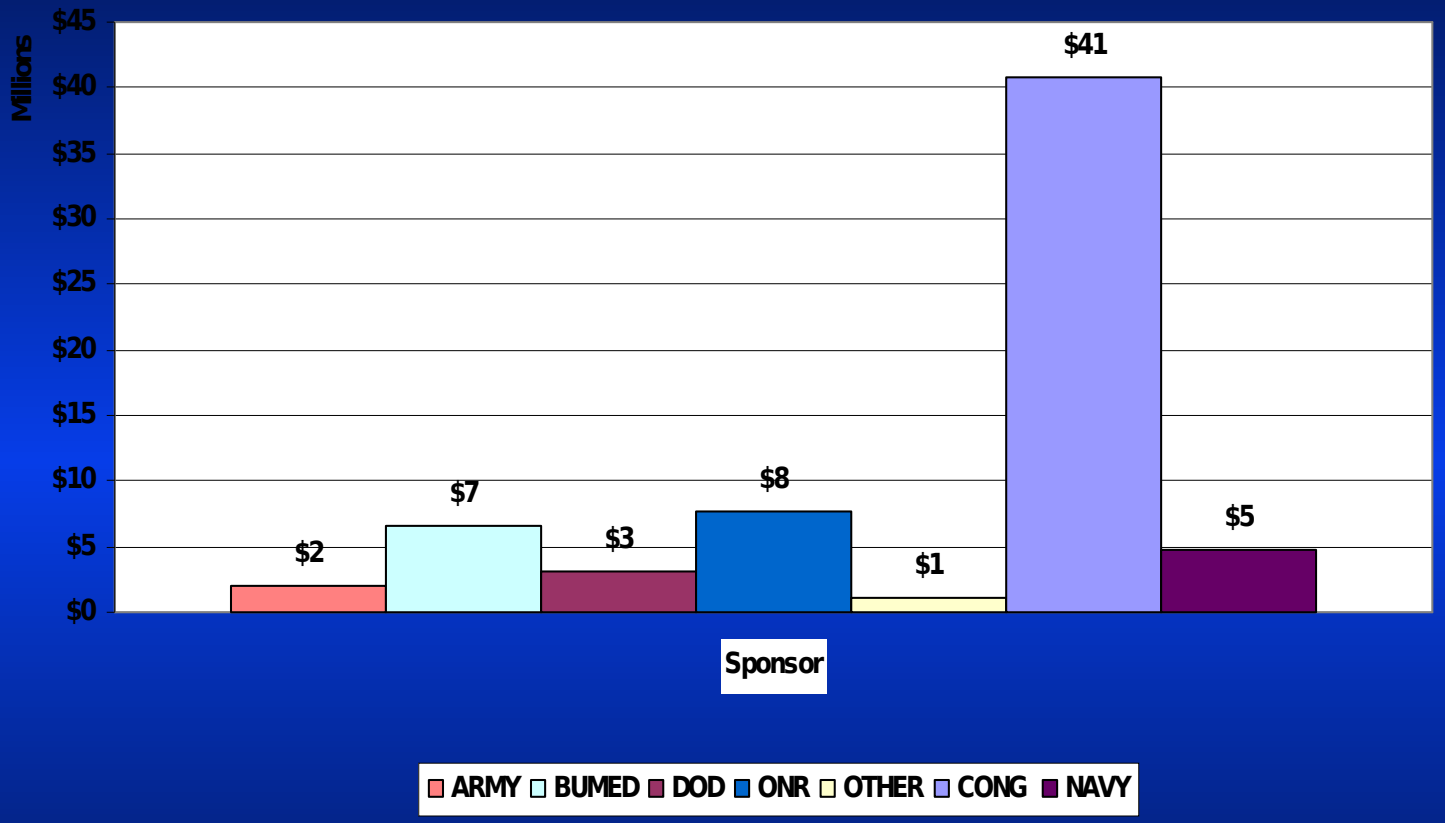
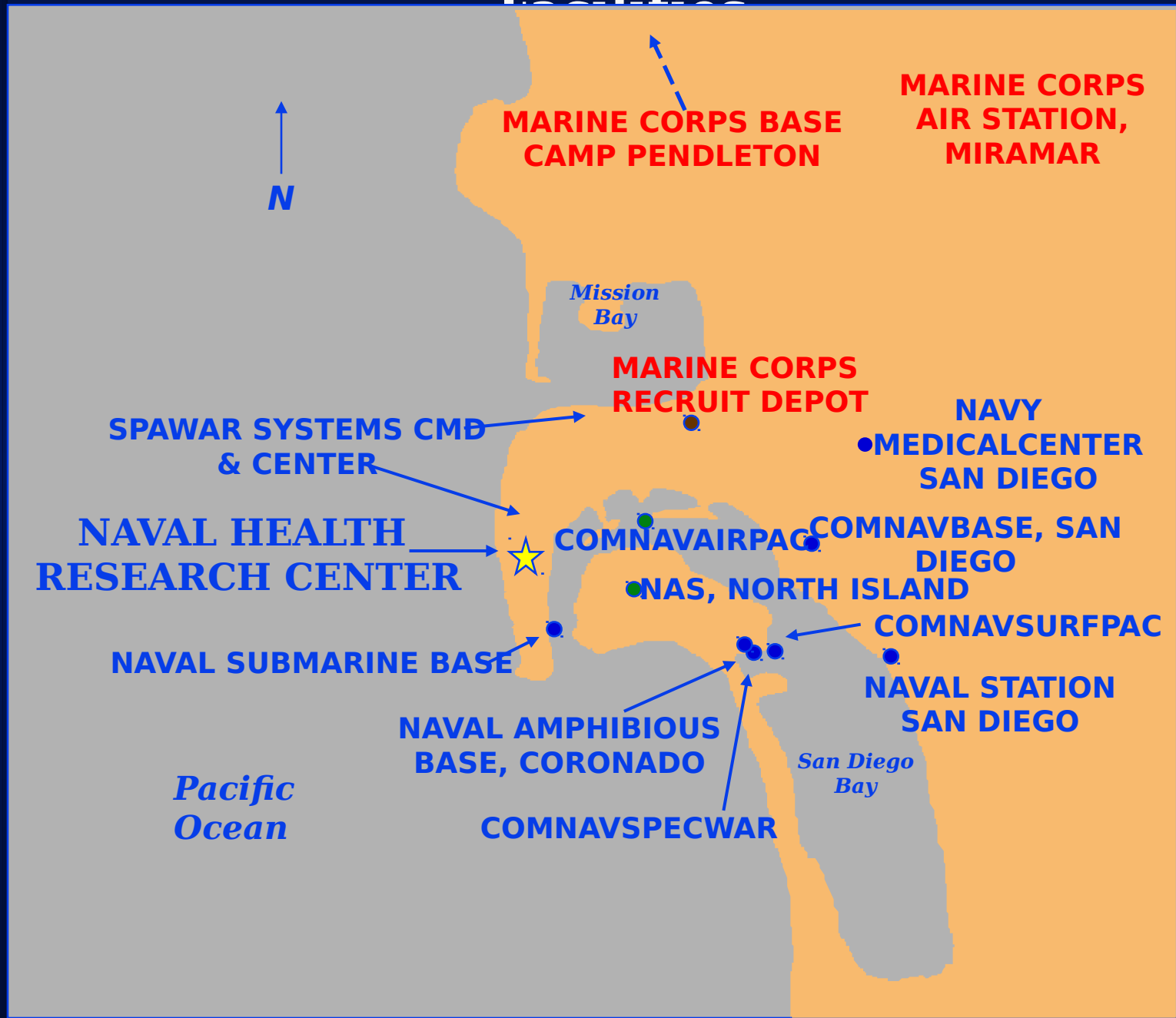
NHRC FY03 New Funding by Sponsor
Total=$ 67M



Funding is appropriately weighted toward applied operational
research (6.3-6.4) vice basic science research (6.1)

- NHRC Corporate $67M
- NHRC LAB $32M

Major Naval and Marine Corps Facilities



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Academic/Industry Collaborators

University of California – San Diego
VA Medical Center
Salk Institute for Biological Studies
Neurosciences Institute
Scripps Institute of Oceanography

University of San Diego

Over 25 biotech companies

San Diego State
University

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Human Performance

Recent Accomplishments:

- Musculoskeletal injuries in SEAL team special boat operators.
  - Sea-trial biomechanics of impact shock & stress
  - Epidemiological surveillance of injuries/illnesses
- Studies on immune system performance and AMS prevention strategies at altitude:
  - USMC Mountain Warfare Training Center
- Automated Heat Stress Monitors
  - 25 Shipboard and 16 training sites

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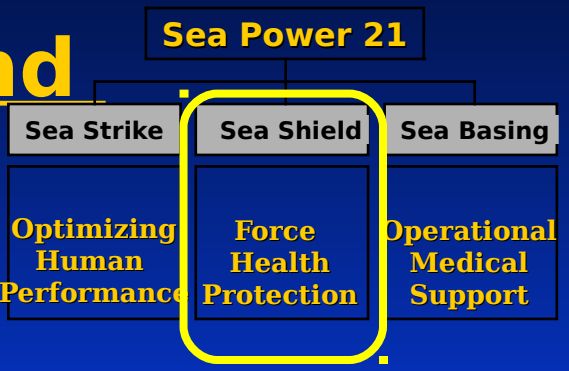
Behavioral Sciences and Epidemiology

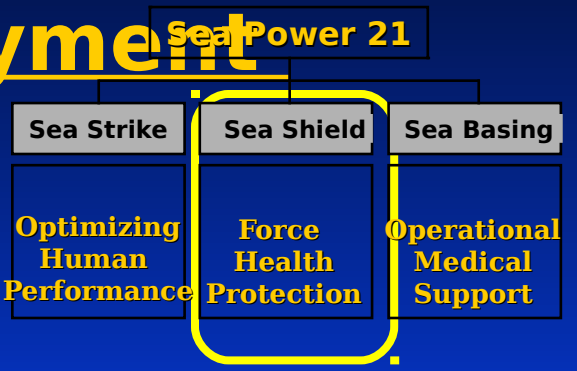


Recent Accomplishments:

- Developed and implemented methods to improve the health and readiness of Fleet and Fleet Marine Forces
  - **Tobacco Cessation**
  - **Alcohol Abuse Reduction**
  - **Drug Abuse Prevention**
  - **Psychological Screening Tools**

- Longitudinal epidemiological studies of injury (e.g., stress fractures) and illness (e.g., mental disorders) in Navy and DoD service members.
  - **USN/USMC recruit training sites & BUDS**
  - **Focused on reducing costs of early**

DOD Center for Deployment Health Research:



- Emerging Infectious Disease Studies:
  - Ongoing surveillance for adenovirus, influenza, other viral and bacterial pathogens causing respiratory illness.
  - SURFPAC Respiratory Disease Surveillance Program
- Deployment Health Epidemiology
  - Millennium Cohort: Health and exposure data followed throughout career and into retirement; ~75,000 participants enrolled to date
  - DoD Birth and Infant Health Registry: data on >90,000 births/year

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Field Medical Technologies

Recent Accomplishments:

- Developed and fleet tested Medical Data Surveillance System (MDSS),
  - Used during Operation Iraqi Freedom by Health Affairs
- Integration and fleet exercise testing of medical command and control sub-systems
- (JMEWS, MedCOP, JMedSAF, MDSS…)
  - closely coordinated with N931, TMIP-M, I
- Field Diagnostic Tools: evaluated three portable ultrasound systems in field and shipboard settings

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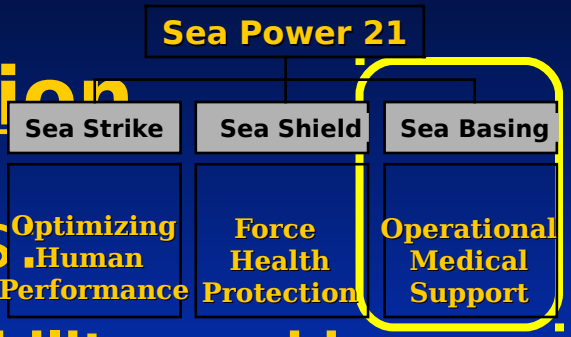
Modeling and Simulation



Recent Accomplishments

- **Refined models and M&S capability used by N931 and Marine Corps**
  - **Project casualty estimates**
  - **Define medical supply requirements (AMAL configurations)**
  - **Evaluate new medical treatment scenarios and training requirements**
- **New findings on MOUT casualty & treatment profiles**
- **Tactical Medical Logistics system used for modeling changes in medical assets & capabilities on system efficiency**
- **Partnered with NOMI on analysis of “Lessons Learned” data from Afghanistan & Iraq**

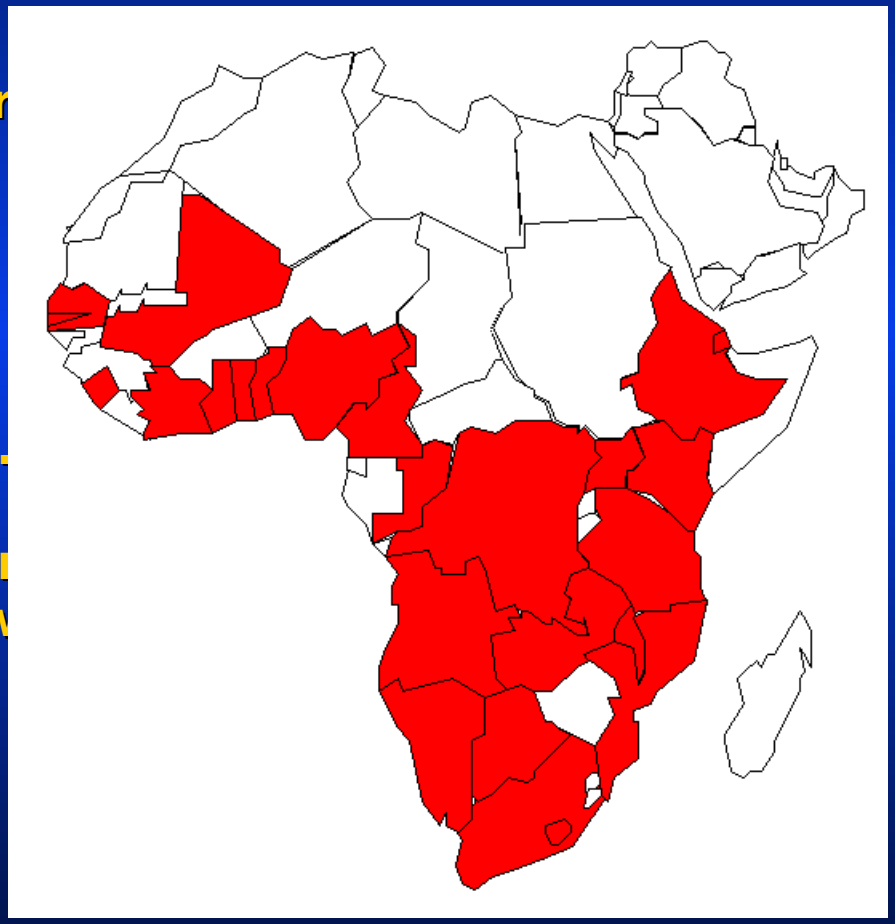
DoD HIV/AIDS PREVENTION PROGRAM

NHRC serves as the Lead Agent for the DoD HIV/AIDS Prevention Program.

Three-Year Intervention program with CENTCOM & EUCOM to suppor foreign military personnel in 27 Sub-Saharan African Countries.

Now directed to go global: Expanding to Ukraine & Russia PACOM: Vietnam, India & Thailand.

Raising awareness, building militar military relationships around the w



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Summary

- RELEVANT OPERATIONAL FOCUS: Applied, requirements driven programs, directed towards:
  - Force Health Protection
  - Improving Warfighter Performance
  - Improving Medical System Efficiency

"Focused research to reduce risks and costs"

- CHALLENGE: Identify stable and adequate funding to reduce the risk of compromising our mission due to a totally reimbursable resource model.
  - Only $600K of 6.6 for five R&D laboratories
    - Army/Air Force receive fenced fiscal resources for overhead & management support
    - Fleet consultative work conducted without reimbursement

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Summary

- PLAN:
  - Currently working through M2 and N931 to identify and resource Mission Essential Capabilities
    - Maximize efficiency within our organization
    - Partnering with Army and Air Force labs
    - Continue to identify fleet requirements through improved communication and marketing